

REMARKS

The Office Action dated June 26, 2007 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-19 are respectfully submitted for consideration.

Claims 1-7 and 16 are rejected under 35 U.S.C. 103(a) as being obvious over EP 0981229 to Hwang et al. (Hwang), in view of US Patent No. 6,785,262 to Yao et al. (Yao). The Office Action took the position that Hwang disclosed all of the features of these claims except a controller, wherein the communications resources are allocated, and wherein the indication is a coded value of a length of a data queue. The Office Action asserted that Yao disclosed this feature. Applicants respectfully submit that the cited references, taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims.

Claim 1, from which claims 2-4, 6, 7 and 16 depend, is directed to a method of controlling communication resources. An indication of future need of communication resources in a first network element is monitored. The indication from the first network element is sent to a controller, wherein the indication is a coded value of a length of a data queue. The communication resources between the first network element and a second network element are controlled based on this indication. Communications resources in a transmission from the first network element to the second network element are controlled, wherein the communication resources are allocated by the controller.

Claim 5 is directed to a method of controlling communication resources. An indication of future need of communication resources in a first network element is monitored. The indication from the first network element is sent to a controller. The communication resources are controlled between the first network element and a second network element based on this indication. Communication resources are controlled in a transmission from the first network element to the second network element across a network, wherein the communication resources are allocated by a controller in the network. The controller is separate and independent from the first network element, and the indication includes information about a transmit buffer of the first network element, wherein the indication includes coded values corresponding to predefined resources.

Applicants respectfully submit that the cited references fail to disclose or suggest all of the features of any of the pending claims.

Hwang is directed to controlling asymmetric dynamic radio bearers in mobile packet data communications. Hwang describes establishing a plurality of radio bearers having a predetermined data. The amount of data stored in a transmit buffer during transmission of the mobile data is examined. The mobile packet data is transmitted with the number of the radio bearers increased or decreased according to the amount of data in the transmit buffer. (see paragraph [0025]).

Yao is directed to the reduction of voice latency in a voice over data wireless communication system. Yao discloses that vocoder frames are stored in the queue 408. The vocoder frames are later digitally modulated and upconverted for wireless

transmission. See col. 9 lines 17-20. Yao further discloses that the data stream 500 as shown in Fig. 5, represents the contents of the queue 408. A processor determines quality of the communications channel by determining the length of the queue. See col. 12 lines 6-8.

Applicants respectfully submit that the cited references fail to disclose or suggest at least the feature of “controlling the communication resources between the first network element and a second network element based on the indication of future need” as recited in claim 1 and similarly recited in claim 5. As discussed above, the Office Action relied on Hwang to disclose this feature as the “number of radio bearers.”

However, Applicants respectfully submit that the Office Action’s interpretation of “communication resources” is unreasonably broad in light of the specification. As discussed in the present specification, for example page 4 lines 18-21, communications resources according to the presently claimed invention is “bandwidth” as opposed to a number of radio bearers. As previously discussed, the present invention is directed to improving the quality of service by efficient allocation of the limited amount of available bandwidth.

According to MPEP 608.01 the meaning of a given term is interpreted in light of the specification. See also 2173.05(a). In the present case communication resources are clearly defined in the specification as bandwidth and should be interpreted as such.

MPEP 2173.01 states that a “fundamental principle contained in 35 U.S.C. 112, second paragraph is that applicants are their own lexicographers. They can define in the

claims what they regard as their invention essentially in whatever terms they choose so long as any special meaning assigned to a term is clearly set forth in the specification. See MPEP § 2111.01. Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. However, in the present case, the Office Action is essentially denying Applicants' right to define the invention using the phrase "communication resources" by ignoring the meaning of that phrase as set forth in the present specification.

Further, as discussed above, the Office Action admitted that Hwang failed to disclose the feature of a controller, wherein the communications resources are allocated, and wherein the indication is a coded value of a length of a data queue, and relied on Yao to disclose this feature. Applicants respectfully submit that Yao fails to cure the admitted deficiencies of Hwang.

More specifically, Applicants respectfully submit that Yao fails to disclose or suggest the feature "a coded value as an indication of the length of the data queue". The data stream 500 shows the actual contents of the queue and is not a coded indication of the queue's length. At best, it is an indication of the data rate. See col. 9 lines 57-59. Further, while Yao may disclose determining the quality of the communications channel by examining the length of the queue, Yao is silent with regards to generating a coded representation of the data queue's length. Thus, Yao merely discloses a coded value of

the data rate, and in an unrelated process, uses the length of the queue to determine a rate at which frames are dropped. Thus, Yao fails to cure the admitted deficiencies of Hwang.

Applicants respectfully submit that based on the above, the cited references of Hwang and Yao, fail to disclose or suggest at least the features of sending the indication from the first network element to a controller, wherein the indication is a coded value of a length of a data queue, controlling the communication resources between the first network element and a second network element based on this indication, and controlling communications resources in a transmission from the first network element to the second network element, wherein the communication resources are allocated by the controller, as recited in claims 1 and 5.

Applicants further submit that because claims 2-4, 6, 7 and 16 depend from claim 1, these claims are allowable at least for the same reasons as claim 1, as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claims 1-7 and 16. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 8-10, 12, 13 and 17 under 35 U.S.C. 103(a) as being obvious over Yao and Hwang. The Office Action asserted that Yao disclosed all of the features of these claims except that the allocation being performed in accordance with information transmitted from the first stations which indicate a need for communication

resources. The Office Action asserted that Hwang disclosed this feature. Applicants respectfully submit that the cited references, taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims.

Claim 8, from which claims 9-13 and 17 depend, is directed to a system for controlling communication resources in a network including a plurality of first stations. A second station is connected to the plurality of first stations through a plurality of communication links. A controller is configured to control the allocation of the communication resources among the links, the controller being separate and independent from the first stations. The allocation is performed in accordance with information transmitted from the first stations which indicates a need for communication resources based upon lengths of data queues in the first stations. The information is a coded value of the lengths of the data queues.

Hwang and Yao are discussed above. Applicants respectfully submit that the cited references fail to disclose or suggest at least the feature of a controller configured to control the allocation of the communication resources among the links, the controller being separate and independent from the first stations”, “the allocation is performed in accordance with information transmitted from the first stations which indicates a need for communication resources based upon lengths of data queues in the first stations” and “the information is a coded value of the lengths of the data queues” as recited in claim 8.

As discussed above, the cited references in particular Yao fails to disclose or suggest the feature “a coded value as an indication of the length of the data queue”. In

Yao, the data stream 500 shows the actual contents of the queue and is not a coded indication of the queue's length. At best, it is an indication of the data rate. See col. 9 lines 57-59. Further, as also discussed above, Hwang fails to disclose or suggest "allocation being performed in accordance with information transmitted from the first stations which indicate a need for communication resources" because Hwang is silent with regards to allocating bandwidth.

Applicants further submit that because claims 9-10, 12, 13 and 17 depend from claim 8, these claims are allowable at least for the same reasons as claim 8 as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claims 8-10, 12, 13 and 17. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claim 11 under 35 U.S.C. 103(a) as being obvious over Yao and Hwang, in further view of US Patent No. 6,975,604 to Ishida et al. (Ishida). The Office Action took the position that Yao and Hwang disclosed all of the features of claim 11 except a data generator. The Office Action asserted that Ishida disclosed this feature. Applicants respectfully submit that the cited references, taken individually or in combination, fail to disclose or suggest all of the features recited in claim 11. Specifically, Yao and Hwang are deficient at least for the reasons discussed above and Ishida fails to cure these deficiencies.

As discussed in previous correspondence, Yao further appears to disclose a voice encoder that generates data frames that are stored in the queue. See Yao at column 9 line 17. Further, Ishida is directed to a base station controller and mobile station. However, Applicants respectfully submit that Ishida fails to cure the significant deficiencies of Yao and Hwang discussed above and with regards to an encoder configured to generate a code representative of the length of the data queue as recited in claim 11.

Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claim 11. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 14 and 18 under 35 U.S.C. 103(a) as being obvious over Yao. The Office Action asserted that Yao disclosed all of the features of these claims except decoding a code representative of a length of the data queue in at least one mobile station. The Office Action took the position that it would have been obvious for one skilled in the art to include a decoder because the decoder would decode the data frames generated by the voice encoder 406 based on the length of the queue. Applicants respectfully submit that Yao fails to disclose or suggest all of the features recited in any of the above claims.

Claim 14, from which claim 18 depends, is directed to a base station that includes a receiver. A decoder is configured to decode a code representative of a length of a data queue in at least one mobile station. A controller is configured to control allocation of

communication resources. The decoder provides queue length information for the at least one mobile station to the controller.

Yao is discussed above. Applicants further submit that Yao fails to disclose or suggest at least the feature of a base station that includes a decoder and a controller as recited in claims 14 and 18.

The decoder 614 in Yao is a part of a receiver unit 600 that receives vocoder frames generated by the TCP processor, to generate a digitized replica of the original signal transmitted from the transmitter 400. See Figs. 4 and 6, column 13 lines 55-60. Yao does not disclose or suggest a base station that includes a decoder and a controller as recited in claims 14 and 18. Thus, Applicants submit that the Office Action is inappropriately reading features into Yao. Accordingly, Yao fails to disclose or suggest all of the features recited in claim 14.

Applicants further submit that because claim 18 depends from claim 14, claim 18 is allowable at least for the same reasons as claim 14, as well as for the additional features recited in this dependent claim.

Based at least on the above, Applicants respectfully submit that Yao fails to disclose or suggest all of the features of claims 14 and 18. Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The Office Action rejected claims 15 and 19 under 35 U.S.C. 103(a) as being obvious over Yao, in view of Ishida. The Office Action took the position that Yao disclosed all of the features of these claims except a data generator. The Office Action

asserted that Ishida disclosed this feature. Applicants respectfully submit that the cited references taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims.

Claim 15, from which claim 19 depends, is directed to a mobile station including a data generator. A data queue is configured to receive data packets from the data generator. An encoder is configured to encode a code representative of a length of the data queue. A transmitter is configured to transmit data with said code included therein as a field.

Applicants respectfully submit that the cited references fail to disclose or suggest at least the features of a data queue is configured to receive data packets from the data generator as recited in claim 15.

As discussed above, Ishida discloses a generator. However, the generator merely sends data to an encoder circuit 616. As recited in claims 15 and 19, the data generator data produced from the data generator 20 is sent to the data queue 22. This feature is neither disclosed nor suggested in Ishida.

Further, Applicants note that this feature is not addressed in the Office Action. Thus, in the event that the application is not in condition for allowance, Applicants respectfully request a new non-final Office Action that completely addresses all of the recited elements of claims 15 and 19.

Based at least on the above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claims 15 and 19.

Accordingly, withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

Applicants respectfully submit that each of claims 1-19 recites features that are neither disclosed nor suggested in any of the cited references. Accordingly, it is respectfully requested that each of claims 1-19 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. E. Brown', is written over a horizontal line.

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